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ABSTRACT

This study sought to identify the factors that affect the retention of black students. The survey responses of 90 randomly selected black college students from two predominantly white southern public universities were analyzed. Both institutions are under court order to desegregate. The following summary findings are reported: (1) participants tended to be dissatisfied with peers, the social dimensions of the school, and the community in which the school was located, but they were neither satisfied nor dissatisfied with the college or professors; (2) professors and black faculty appear to reinforce the thoughts retained by the participants about the college; (3) participants viewed black faculty as successful and desirable, and saw a need for more black faculty to help black students; and (4) participants did not perceive cooperation between black and white students, nor did they perceive equal opportunities for black and white students, nor did they see a connection between the school's supportive recruitment practices and the graduation of blacks from white colleges. Statistical data are presented in four tables. A list of 54 references, a list of sample items and internal reliability coefficients of scales, and a glossary are appended. (FMW)

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THE COLLEGE MILIEU FOR THE 1990s:

INCREASING BLACK STUDENT RETENTION RATES ON WHITE CAMPUSES

by

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April, 1990

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Paper presented at the annual meeting of American Educational Research Association, Boston.

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INTRODUCTION

In an era where college participation rates of blacks are shrinking, many predominantly white southern institutions of higher education are still facing desegregated mandates (Jaschik, 1989). Therefore, the rush for a representative black student population has become more competitive than a decade ago.

To attract black students to white campuses, expensive college marketing campaigns have been instituted. Opposing the magnitude of these recruiting efforts, traditional black colleges argue white college competition financially threatens their existence and traditional purposes (Black Issues, 1985). Comparatively, white colleges have financially been able to strategically plan recruiting efforts with greater financial mobility than black colleges (Black Issues, 1987).

Yet, despite the success of recruiting programs of blacks on white campuses, the enrollment figures do not substantially compare to retention and graduation rates of blacks. During the last decade, statistical reports showed while black enrollments on some white campuses increased, retention and graduation rates were low. Some college attrition studies have shown that the attrition rates are higher and graduation rates are lower for blacks at predominantly white universities (McCauley, 1988; Nettles, Gosman, Thoney and Dandridge, 1985; Thomas & McPartland, 1981). Comparatively, Nettles et al. (1985) found by the end of the second year of college, the attrition rate for blacks was 34%, compared to the white's 31%. By the end of the end of the fifth year, the attrition mean percentages increased as much as 9%, compared to the 7% attrition increase for whites. One reason for the black attrition increase at the end of the fifth year was graduation rates for blacks at predominantly white universities were either slower or lower than white students. Nettles et al. also found that while 43% of white students graduated in four years, 35% of the blacks

graduated within this same period. 48% of the blacks graduated in five years, compared to the 56% of white students. It cannot be overlooked, however, that Nettles et al. found similar attrition and graduation patterns of whites attending predominantly black universities. It is obvious that financial inducements frequently fail to retain blacks at predominantly white colleges.

This observed phenomena of black college student withdrawal from white colleges has generated retention programs designed as intervention models for dropout behaviors, particularly in response to black students (Moore & Carpenter, 1985; Valverde, 1985). Yet, some retention programs have been unable to prevent blacks from leaving their colleges.

In responding to what appears to be persistent college dropout patterns among blacks on white campuses, some social scientists and educators have attributed the behaviors to academic and social isolation (Gibbs, 1973; Willie & McCord, 1973). Purportedly, black students on white campuses do not have access to academic learning when they are frequently tracked in remedial programs. This limited access is further evident when black students frequently receive lower grades than white students (Loo & Rolison, 1986).

Causal explanations for this lack of academic and social integration with black college students have led some researchers to conclude academic self-concept and self-reliance is more important to blacks than to whites (Portes & Wilson, 1976; Tracey & Sedlacek, 1984, 1985). The critical assumption is noncognitive behaviors of self influence black students' college persistence, while white college students' persistence is influenced by cognitive behaviors. The underlying assumption is that black students function in sponsored mobility environments that enable them to have psychological support for high self-esteem, compared to white students functioning in competitive-oriented environments (Porter, 1974). However, this limited perspective

of academic and social behaviors attributes outcome behaviors to personal traits for blacks. `In effect, what is being neglected is reciprocal influences of external/internal regulators on each other.

THE PROBLEM

What is quite disturbing throughout the literature is conflicting findings of the process of educational attainment differences between blacks and whites (Alexander et al., 1982; Gottfredeson, 1981; Kerckhoff & Campbell, 1977; Thomas et al., 1979; Wolfle, 1985). Wolfle (1986) argues the process of postsecondary attainment is the same for black and white students. However, Wolfle merely re-examines regression measurements of family background, high school ability and grades, and curriculum by using a LISREL (Joreskog & Sorbom, 1981) model. Presumably, the net effect of these common latent factors predict the postsecondary attainment process for both black and white students. Furthermore, with this conceptualization process attainment, it is assumed the net effects of produced factors will be consistent across situations and fairly stable over a period of time.

What is more disturbing is despite college attrition differences between black and white students (Avokian et al., 1982; Bennett & Bean, 1982; Lichtman et al., 1989), the observed phenomena of college withdrawal behaviors of black students has been inadequately addressed by researchers. Limited college attrition studies on blacks on white campuses is particularly noted. Yet, two lines of research studies (college effects and college persistence/withdrawal) have been the impetus for college retention paradigms, especially to retain black students.

A critical re-examination of these studies raises questions of their general applicability of findings for explaining why some blacks leave predominantly white colleges and universities.

COLLEGE EFFECT STUDIES

Drawing upon the earlier works of Lacy's (1978) college effect model, recent research studies on college effect have emerged (Astin, 1984; Pace, 1984; Parker & Schmidt, 1982; Pascarella, 1985). These studies causally explain how personal (pre-enrollment characteristic and institutional (structure, organization) factors influence postsecondary attainments. This student-institutional fit is further explained with interactions within academic (faculty) and social (peers) settings.

Personal factors (e.g., SES, secondary achievement) are frequently analyzed as exogenous variables influencing college selection type and academic and social experiences. Within the causal attainment processes, personal and institutional factors function as exogenous variables contributing direct effects on academic and social experiences. In turn, these direct effect factors influence subsequent postsecondary outcomes. Presumably, what happens to a person in college environments is largely dependent on what one enters with and how various collegiate experiences affect personal characteristics. It is also assumed that if one is able to adjust to the academic and social environment, college outcomes are positive.

This conceptualization of college effects assumes each attainment process is independent and cumulative in its effects on students. Little is known from existing studies how various college environmental factors may indirectly affect attainment with different students' actual academic and social experiences. There is, however, some evidence that patterns of direct college effects on outcome differ by race and gender at different types of institutions. Particularly, differential patterns of college influences can be seen when mediated by academic and social experiences (Astin, 1982; Pascarella, 1984; Pascarella et al., 1987; Sedlacek & Webster, 1978; Trujillo, 1986). Much of student performances, as well as responsiveness to collegiate

conditions, may be contingent on their perception and satisfaction from academic and social interactions (Aitken, 1982; Gamson et al., 1980; Taylor, 1986). Yet, college effect frameworks fail to consider potential differential patterns of college effects on students' attainments.

COLLEGE PERSISTENCE/WITHDRAWAL STUDIES

Influenced by Tinto's (1975) conceptual model of the process of college persistence/withdrawal, a number of longitudinal studies on college attrition have also emerged. As with college effect studies, this growing body of knowledge has influenced retention programs as well (Bean, 1982; Pascarella & Chapman, 1983; Tinto, 1982, 1987). Dropout behaviors tend to be strongly related to academic, socio-psychological, and institutional factors. What is generally posited is students enter college with various background (e.g., gender, race, academic ability) characteristics which influence goal commitment indicators (e.g., degree aspirations). In effect, these influential factors play a significant role with how well the individual will adjust and subsequently integrate into the academic and social settings of the college. If incongruent behaviors exist between the student and college, the greater the dropout expectancy.

When examining this direct relationship between person and environment, this student-institutional fit concept becomes problematic with different groups. That is, when academic integration is viewed as the function of academic performance and performance as the function of grades and goal commitment, academic variances with different groups remain unexplained. Selected studies have shown while educational aspirations of black college students tend to be initially higher than white college student (Allen, 1985; Nettles et. al., 1985), high aspirations for blacks do not eventuate successful academic and social integration or graduation attainments. In fact, college

pattern variations between blacks and whites tend to occur most frequently with dimensions of academic and social environments.

However, Tinto's conceptual model does not address specific academic dimensions that effectuate full integration. The model also places student-faculty relationships within social systems, rather than academic systems where interactive behaviors with faculty have been found to have some direct and indirect negative effects on minorities' academic performance (Burrell, 1981; Hall & Allen, 1983; Trujillio, 1986; Wilson, 1981). Aitken (1982) and Pascarella & Terenzini (1980) found student-faculty relationships and instructional behaviors contributing strongly to successful academic integration. Thus, college persistence is greatly dependent on students' perceptions and satisfaction with what happens in academic and social settings.

The social integrated system as conceptualized becomes problematic also when the college setting is not examined in relationship to social dimensions of the environment. Earlier school environment models explained student outcomes in relationship to interactions among various environmental dimensions that are mediated by climate and/or psychological factors (Moos, 1976). Tajuiri (1968) posits the total educational environment not only includes a social system, but a social milieu and culture as well. Thus, to examine social integration, college environments must be explained in relationship to reciprocal functions of person and environment. If behaviors partly influence environment, environment must also be viewed as causes of human responsiveness.

Finally, as Tinto (1982) acknowledged, the widespread acceptance of this college attrition model is warranted with different groups. The extent and process of attrition variations among different groups need to be explained. In other words, proposed aggregate models of college attrition are longitudinal, not cross-sectional.

As a result, they underestimate differential dropout behaviors which require separate analyses of specific group behaviors with specific academic and social dimensions. Perhaps cross-sectional designs will help explain why some blacks experience academic and social successes in various predominantly white college settings, while others do not.

PURPOSE

The primary purpose of this study was to examine some black college students' retained cognitive knowledge of the environment in relationship to environmental influences. The secondary purpose was to determine if the participants were functioning in interdependent or independent environments, and if these environments were significantly influenced by cognitive knowledge of the environment.

Two interaction theories guided this study to examine the student-institutional relationship between some black college students and their predominantly white college environments.

KURT LEWIN'S INTERACTION MODEL

Kurt Lewin's (1936) theoretical construct of person-environment relationships appears to be the impetus for causally explaining college effects and persistence/withdrawal behaviors. What has emanated from this behavioral view is a student-institutional fit in which internal (e.g., self-concept, goal commitment) and external (e.g., institutional goals, structure) factors influence college outcomes. Thus, human responsiveness is viewed in relationship to internal/external influences.

In explaining the observed phenomena of college dropout behaviors, it is commonly accepted that if student and institutional characteristics are incongruent,

this mismatch will eventuate college dropout. Students and institutional conditions are treated as independent entities that subsequently interact to effectuate attainment behaviors. Thus, college attainment behaviors are the function of student and environment interactions. Presumably, students who are able to adjust to the college environment become integrated into the academic and social settings that effectuate college attainment.

Lewin's model fosters an understanding of human behavior by examining the total college environment in which student behaviors occur. However, because behavior is viewed as a function of the interaction of person and environment, this perspective places the environment in control. Students are frequently expected to adjust to the environment. Consequently, the student behaviors become externally regulated.

BANDURA'S SOCIAL COGNITIVE THEORY

Bandura's (1977, 1986) interaction model presents a different set of assumptions for causally explaining person-environment. Rather than viewing person and environment as independent determinants, Bandura views this relationship as reciprocal determinants of each other. It is largely through actions that people produce environmental conditions. In turn, these conditions affect behavior in a reciprocal fashion. The experiences generated by behavior also partly determine what a person becomes and can do. Thus, these experiences have subsequent effects on behaviors.

How people respond to their environment is mediated by thoughts which regulate actions. With this theoretical view of person-environment interactions, Bandura posits a social-cognitive model. Behavior, cognitive, personal factors, and environmental influences operate interactively as determinants of each other to

effectuate expectancy outcomes. Thus, what people think, believe, and feel affects how they will behave or respond to the environment. It is this interactive relationship between thought and action that must be examined to understand person-environment relationships.

According to Bandura (1977), people do not simply react to stimulus events. They interpret events and organize the information derived from events into beliefs about what leads to what. Causal beliefs, in turn, affect which dimensions of environmental effects are attended to. How this attended information is cognitively interpreted and retained leads to expectancy outcome behaviors. In a social cognitive view, contingent experiences create expectations on beliefs, rather than stimulus-response associations.

To a large degree, this study employed a social cognitive analysis. As Halpin & Croft (1963) noted, the actual behavior is less important than perceived behavior, because perception is what controls one's response. Findings from Nettles et al. (1985) strongly suggest some of students' attitudes developed in college may significantly be attributed to their college performance.

In applying Bandura's theory to black students' experiences on white campuses, their cognitive processes of environmental events must be examined. What the students retain from the environment are either confirmed or refuted by feedback mechanisms in the environment. It is with this retention knowledge and feedback influences that black students begin to integrate into interdependent and/or independent sectors of the college environment. The eventual behavior of persistence or dropout for black college students is a function of these determinant factors.

RESEARCH QUESTIONS:

In light of the cited theoretical constructs, this study addressed 12 questions:

1. What knowledge/thoughts do the black students retain about the college components (e.g., professors, classes, campus life)?
2. What type of feedback from the college environment (professors, black faculty, peers) influences the knowledge retention?
3. Are black faculty members cognitive models who confirm or refute knowledge retention of the college environment?
4. What type of college environment (interdependent, independent) do the black students have?
5. Do pre-and college-entry factors (SES, gender, GPA, degree aspiration) factors significantly influence what the black students retain about the college?
6 Is there a significant relationship between knowledge component factors?
7. Is there a significant relationship between feedback from the college environment and knowledge retention of the environment?
8. Is there a significant relationship between the perceived interdependent and independent environments?
9. Do pre-and college-entry factors have a significant effect on knowledge retention, feedback influence, cognitive black models, and college environmental type?
10. What significant effects do cognitive black models and environmental scales have on knowledge retention of college components?
11. What significant effects do knowledge retention and feedback influences have on environmental scales?
12. Is there a significant differences betweeen the two groups and how they perceive the college, feedback influences, cognitive black models, and college environment?

METHOD

Subjects

Ninety black college students from two mid-sized, predominantly white southern public universities were randomly selected to participate in the study. Both four-year institutions were located in nonmetropolitan communities. The two southern universities were also located in two different states that are under court orders to desegregate systems of higher education. The black student population at both universities was less than four percent of the total student enrollment.

42% of the students were freshmen, while 17% were sophomores. Average college GPAs ranged from 2.5 to 2.9 (31%) with a major in business (28%). The highest degree aspiration was a master's degree (52%). A majority of the participants in the study were from average ($25,000) families, and were recruited (82%) and on scholarship programs (42%). Less than 1% of the participants made a personal choice initially to attend the university.

Instrumentation

A survey instrument was designed by the researcher to assess data from the sample groups. The Black College Student Environment Questionnaire consisted of demographic data, reasons for college and college type, educational aspirations, and postgraduate plans. College entry achievement scores for respondents were obtained by the researcher and coded with surveys. This data were subsequently labled as pre-entry college factors in the study.

Other dimensions of the survey initially consisted of 45 item statements divided into four scales. However, after a pilot test of the instrument, preliminary versions of the scales were revised. The final version of the instrument resulted in 36 item statements measuring (1) cognitive retention sources from component parts of the environment; (2) cognitive feedback influences from the college environment; (3)

cognitive black models from the environment, and (4) actual experiences in interdependent and independent college environments. Appendix 1 presents sample items and internal reliability coefficients of item statements. The operational definitions of measurement for scales are presented in Appendix 2.

A principal-component factor analysis with varimax orthogonal rotation was first performed on two scales: (1) perceived knowledge in relationship to retention and feedback influences from the college, and (2) cognitive black models in relationship to retention and feedback influences. Communality statistics were used with an iteration procedure. Communalities for all variables ranged from 45% to 76%. Eigenvalues showed the proportion of variances associated with Factor 1 was 6% and 3% for Factor 2. From the college environmental scale, 2 factors emerged: (1) interdependent and independent. Communalities ranged from 50% to 85%. Eignevalues for Factor 1 was 17% and 3% for Factor 2. A factor loading of $\geq .40$ was selected as item inclusion criterion.

1st Scale consisted of two subscales. The first subscale consisted of 10 item statements designed to measure the type of knowledge retained from the college environment. Employing a 5-point Likert scale, participants were asked to rate the degree of satisfaction (very satisfied (5) to very dissatisfied (1) with various college components (e.g., classes, social activities and services) of the environment. The internal consistency for this subscale was .98 (*alpha*). EXAMPLE: Based on what you know about the academic services, how satisfied are you with having access to the academic services?

The second subscale consisted of 5 item statements measuring feedback influences that reinforce retentional thoughts. Participants responded on a 5-point scale of satisfaction. EXAMPLE: How satisfied are you with the academic help received from professors? The internal consistency was .96 (*alpha*). The alpha

coefficient for both subscales was .86.

2ND SCALE consisted of 6 item statements measuring cognitive black models from the environment in relationship to personal preconceived thoughts about the environment. On a 5-point Likert scale of agreement, participants responded strongly agree (5) to strongly disagree (1). EXAMPLE: Black faculty members are good mentors for black students, because I have observed they are promoted to high positions on campus. The internal consistency was .93 (*alpha*).

3RD SCALE was divided into 2 environmental subscales to measure actual academic and social experiences in interdependent and independent situations. The interdependent scale consisted of 8 item statements on a 5-point Likert scale agreement, while the independent scale had 7 items. INTERDEPENDENT EXAMPLE: When black and white students work on group projects together, my instructors or professors grade all group members the same. The internal consistency was .90 (alpha).

INDEPENDENT EXAMPLE: It is difficult for black students to make high academic grades at predominantly white colleges, because they have to achieve their academic goals alone. The internal consistency was .91 (*alpha*). The alpha coefficient for both scales was .86.

The alpha coefficient for all 36 items was .83. (See Appendix 1.)

OPERATIONAL DEFINITIONS (See Appendix 2.)

Three statistical procedures (Pearson correlation, multiple regression, and t-test) were employed to examine knowledge retention of the college environment, feedback influences, cognitive black faculty models, and the college environment type. The level of significance was set at .05.

DATA RESULTS

Descriptive Summary

First, this study was interested in identifying what knowledge/thoughts about the college environment tend to be retained by the students. Based on what the participants observed and knew about various college components (e.g., professor, classes, achievement merit system), satisfaction responses were given. The researcher was interested in the dissatisfaction scores for further analysis. Low mean scores showed participants tended to be more dissatisfied with student peers, social dimensions of the college, and the community in which the college was located. The students were neither satisfied or dissatisfied with the college or professors. No college component received a mean score higher than 3.4.

Second, the study identified college factors (e.g., professors, black faculty, peers) who could possibly be reinforcing thoughts retained about the college environment. Moderated satisfaction scores with feedback influences of professors and black faculty were constant with knowledge retention responses. Low mean scores with counselors and community indicated the low feedback influence on academic and social dimensions of the college.

Third, this study posited that college outcome behavior is a function of thought and action of people interacting with environment. Cognitive thoughts are frequently procesed in response to feedback influences from the environment, as well as cognitive models, who either confirm or refute the thoughts being processed and retained. How the black students perceive black faculty members helps to identify expected outcomes of the students in relationship to what they see occurring with black faculty attainments at the college. The students saw a need to have more black

faculty members to help black students achieve their college goals. Moreover, they also viewed the black faculty as successful, as well as someone with whom they want to be assigned. If black students and faculty could share time together, black students could learn from their successful experiences.

The fourth dimension of the study was interested in identifying the type of college environment (interdependent/cooperative or independent/competitive) in which the students perceived to be their functioning behavior at the college. The results showed lower mean scores on the interdependent subscale than on the independent subscale. The students did not view the college as a cooperative place between black and white students. Nor did they agree that the academic learning environment affords black students the same opportunities as white students. To them, blacks at predominantly black colleges have a more supportive environment than they. While the college's recruited behaviors were viewed supportive, the supportive behaviors were not viewed in relationship to graduation of blacks from white colleges.

Research Question #5: Do pre-entry (SES, gender, age) and college entry (GPA, achievement scores, degree aspiration) factors significantly influence what the black students retain about the college?

Previous research (e.g., Astin, 1975; Tinto, 1982; Wolfle, 1986) has shown that pre-entry factors from high school achievement, family SES levels, and educational aspirations influence college integration and attainments. However, in examining the pre-entry and college influences on knowledge retention of the college setting, Pearson correlation showed the students' thoughts were influenced more by consequences of experiences than expected pre-entry influences.

Students' pre-entry academic achievement scores and major field of study

What the students retained about the professors seem to be associated with experiences in classes ($r = .54$), as well as from relationships with peers in classes ($r = .54$), ($p < .01$). Furthermore, if the students tended to be satisfied with the professors, they were satisfied with academic services ($r = .54$). Consequently, if academic services were perceived high, the academic merit system was perceived high ($r = .64$, $p < .01$). Perhaps the data suggest academic performance is a function of how black students have organized and integrated their thoughts from academic experiences. It was interesting to find college counselor not only seem to influence the thought of academic services ($r = .51$), but thoughts about the college as well ($r = .51$). To help black students with possible false beliefs that can eventuate withdrawal actions, counselors can serve as support systems.

Research Question #7: Is there a significant relationship between feedback from the college environment and knowledge retention of the environment?

As Table 1 also presents, the thoughts retained about professors is influenced by the feedback received from professors ($r = .65$), especially in classes ($r = .54$) with the achievement merit system ($r = .56$), ($p < .01$). Similarly, the thoughts about black faculty members are influenced by the feedback from the black faculty ($r = .79$), ($p < .01$). It can be assumed that if negative thoughts about professors are confirmed, the dominance feedback from the black faculty can either alter false beliefs or possible withdrawal actions of the black students. Perhaps this is why the need for black faculty was later moderately influenced by the need for black students ($r = .72$) to share experiences and success ($r= .61$), ($p < .01$).

Table 1 also shows most of the thoughts about different aspects of the college seem to be influenced by peers at the college ($r = .65$), as well as in classes ($r = .57$), ($p < .01$). The thoughts about student peers are influenced by the feedback received from peers ($r = .67$), who in turn, influence thoughts of the academic services ($r = .59$)

TABLE 1
Intercorrelations among knowledge retention of college and feedback influences

	Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Knowledge Retention																	
1.	College	3.3	1.1	1.00	35*	.30*	.53*	.57*	.60*	.36*	.55*	.54*	.37*	.28	.24	.65*	.51*	.49*
2.	Profess	3.4	.7		1.00	.27	.54*	.28	.21	.16	.54*	.44*	.24	.65*	.33*	.41*	.55*	.35*
3.	BlacFac	3.1	1.2			1.00	.18	.10	.70*	.21	-.03	.14	.14	.32*	.79*	.19	.27	.33*
4.	Classes	3.3	.9				1.00	.54*	.70*	.14	.32*	.21	.14	.54*	.27	.47*	.33*	.33*
5.	StudPeer	2.9	1.1					1.00	.70*	.70*	.40*	.22	.33*	.30*	.15	.67*	.32*	.43*
6.	CampLife	2.5	1.2						1.00	.54*	.33*	.28	.70*	.01	.20	.46*	.30*	.42*
7.	SocActiv	2.8	1.2							1.00	.32*	.32*	.31*	.10	.22	.33*	.32*	.33*
8.	AcadServ	3.4	.9								1.00	.64*	.41*	.32*	.08	.59*	.38*	.30*
9.	AchMerit	3.2	.8									1.00	.33*	.56*	.25	.54*	.38*	.24
10.	Communit	2.5	1.1										1.00	.26	.23	.34*	.31*	.65*
	Feedback Influences																	
11.	Professo	3.2	.9											1.00	.36*	.37*	.52*	.40*
12.	BlacFacu	3.2	1.2												1.00	.37*	.40*	.40*
13.	Peers	3.2	1.1													1.00	.46*	.39*
14.	Counselo	3.0	1.1														1.00	.56*
15.	Commu	2.4	1.2															1.00

Note. Profess, Professo = Professor; BlacFac, BlacFacu = Black Faculty; StudPeer = Student Peer; CampLife = Campus Life; SocActiv = Social Activities
AcadServ = Academic Service; AchMerit = Achievement Merit; Communit, Comm = Community; Counselo = Counselor
N = 74
*$p < .01$.

and achievement merit system ($r = .54$), ($p < .01$). This finding suggest if the black students observe that academic performances are the same as white students; yet, the academic outcomes differ, the black students will cognitively process information from the environment differently than white students. Moreover, academic integration will take a different meaning than it does with white students.

Research Question #8: Is there a significant relationship between the perceived interdependent and independent environments?

When the students felt a part of a cooperative environment, they tended to feel accepted ($r = .54$). Consequently, this acceptance enabled them to function in an environment that wanted racial groups to have the same benefits ($r = .64$). Being in an interdependent environment made them feel more respected than in an independent environment. The more cooperative the environment, the more social opportunities ($r = .60$) and the more accepted they felt ($r = .57$), ($p < .01$). Surprisingly, black faculty models did not seem to influence college environments. This finding was partially due to subsequent findings with the need for black faculty members on predominantly white campuses for black students to have successful black models. The finding also suggest that if black faculty members are not present, negative perceptions of the college environment increase.

Research Question #9: Do pre-and college-entry factors have a significant effect on knowledge retention?

Multiple regression analyses were employed to identify which pre-and college-entry variables would best explain variation in retention, feedback, cognitive models, and college environment. Regressing each scale on these variables, while controlling for other variables, enabled the researcher to conceptually explain what exogenous factors significantly influence the processes of thoughts from the environment.

Regression analysis confirmed the study's previous correlational findings with family SES levels and knowledge retention. R^2 values in Table 2 show low variances in knowledge retention of college factors due to family income, parents education and occupation. It can be seen that the proportion of variance in classes was only accounted for by 7% of the variance in SES. Table 2 also shows retention is hardly explained by GPA, achievement scores, enrollment status and classification, or major field of study. Similarly, the variances in degree aspirations and postgraduate plans hardly explain variances in retention.

On the other hand, when the contribution of other college-entry factors were examined, R^2 values of knowledge retention factors increased significantly with reasons to attend college. The knowledge of college (R^2 = .32, p < .23) and academic component variables accounted for an increasing percentage of the variance explained in the criterion. What was largely explained was thoughts about black faculty (R^2 = .38, p < .11), classes (R^2 = .37, p < .12), professors (R^2 = .34, p < .18), and academic services (R^2 = .28, p < .33). Getting away from home (beta = -.39) and gaining an educational experience (beta = .33) had the greatest effects on knowledge retention of college.

Comparatively, lower variance with campus life (R^2 = .30, p < .57) was explained by variances in college reasons. Only a small proportion of variance in social activities (R^2 = .20, *p* < .63) was associated with variance in college reasons. It appears the students' initial thoughts for going to college can influence how they will cognitively process infromation form environmental events. While getting away from home (beta = -.39) and gaining an educational experience (beta = .33) had the greatest effects on knowledge retention of college, gaining an educational

TABLE 2
Multiple regression of pre and college entry variables on knowledge retention

Variables in Regression	Knowledge Retention										
	Coll	Prof	Blac Fac	Class	Stud Peer	Camp Life	Soc Act	Acad Serv	Ach Merit	Comm	
				R^2							N
Pre-Entry (SES)	.07	.05	.06	.07	.02	.08	.03	.05	.06	.04	79
College Entry (GPA, ACT)	.02	.10	.03	.06	.06	.05	.03	.05	.04	.08	82
College Reasons	.32	.34	.38	.37	.21	.30	.20	.28	.18	.12	34
Degree Aspiration	.02	.02	.00	.01	.00	.03	.04	.04	.01	.01	79

experience had the greatest effect on academic knowledge retention as related to interactions with faculty (beta = -.40) student peers (beta = .38) in campus life settings (beta = .47).

Research Question #10: What significant effects do cognitive black models and environmental scales have on knowledge retention of college components?

While controlling for the feedback variable, cognitive black models and environmental scales were analyzed for their effects on knowledge retention of college components.

R^2 values increased more significantly than the college entry reason variable set. R^2 values for retention of college (.62, $p < .0001$), student peers (.61, $p < .0001$), professors (.59, $p < .0003$), campus life (.54, $p < .001$), and community (.52, $p < .002$) were largely explained by cognitive black models and environmental type. It can also be observed that the set of variable explained academic knowledge retention of classes ($R^2 = .50$, $p < .01$), academic services ($R^2 = .43$, $p < .05$), and achievement merit ($R^2 = .42$, $p < .05$). Once again, it appears that the insitutional fit for the black students is more within the academic dimension of the environment than the social dimension. Table 3 shows having black faculty models to facilitate with how thoughts from academic experiences are processed can possibly increase persistent behaviors of black students. It is also apparent that the type of college environment that black students are expected to function can greatly affect how they will proces information from academic experiences with professors and student peers in classes. Not only did beta coefficients show a great effect of equal academic services on professors (.43), but the greatest effect on the need for black faculty mentors (.75) to share (-.73) as well. However, if the students decide to persist in an independent

college environment, this decision can influence how new thoughts will be constructed about the college and classes (beta = .41), student peers (beta = .46), and achievement merit (beta = .30). The black students who don't feel respected on campus will cognitively process information differently about the college (beta = -.36) than those black students who feel a part of the college (beta = .23). However, if the students feel equal academic services are being provided (beta = .45), they will retain positive thoughts about classes, and feel accepted within the mainstream of campus life (beta = .29).

Research Question #11: What significant effects do knowledge retention and feedback influences have on environmental scales?

When the regression of retention and feedback scores on environmental scales were analyzed, the R^2 values and beta coefficients for college environmental scale increased. In an interdependent environment, race relations encouraged everyone to benefit (R^2 = .47, $p < .001$). Consequently, black students feel a part of a cooperative environment (R^2 = .43, $p < .002$). Furthermore, it seems that acceptance in the college environment (R^2 =.48, $p < .001$) meant being integrated into the total campus life (beta = .27). It can be seen from Table 4 that having minority opportunities supported by the college environment (R^2 = .33, $p < .04$) seem to be in relationship to the type of feedback from professors (beta = .30) and what happens in social activities (beta = .28) and classes (beta = .26). Similarly, equal academic services for everyone to achieve the same goals (R^2 = .39, $p < .01$) seem to be strongly influenced by what happens with professors (beta = .46), as well as the feedback from them (beta = -.39), and what happens in their classes (beta = .32). Access to academic services appeared to be more important than social activities

TABLE 3

Multiple Regression Summaries for college environment and some cognitive Black model effects on knowledge retention of college

	Knowledge Retention of College [a]																			
Variable	College		Profess		Blac Fac		Classes		Stud Peer		Camp Life		Soc Activ		Acad Serv		Ach Merit		Communit	
	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t
APART	.23	1.7			.28	2.0*					.27	1.8								
EQUAGRAD							.45	3.5***	-.25	-2.1*									.26	1.7
DIFFGRAD					.30	2.1*			.25	2.3*										
ACCEPTED											.29	1.8	.25	1.4			.28	1.6		
MINOPP													.34	2.6**						
EQUAACADEM			.43	3.8***																
RESPECT	-.36	-2.8**																	.25	1.7
REMISO	.41	3.1***					.42	2.8**			.28	2.0*			.42	2.6**	.30	1.9*		
SOCINTIMMO	.25	2.4*	.22	2.0*											27	2.1*				
BLACSEC	.16	1.4			.31	2.1*														
BLFACMEN	-.28	-2.3*	.30	-2.4*			.26	1.9*												
NEEBLAC	.30	1.4	.75	3.4***															.31	1.3
BLACSHAR	-.19	-1.1	-.73	-4.2***															-.36	-2.0*
F (21,51) =	3.9***		3.4***		1.4		2.4**		3.7***		2.9**		2.0*		1.8*		1.8*		2.7**	

Note. College Environment Variables are APART, EQUAGRAD, DIFFGRAD, ACCEPTED, MINOPP, EQUAADADEM, RESPECT, REMISO, SOCINTIMMO. Cognitive Black Model Variables are BLACSEC, BLFACMEN, NEEBLAC, BLACSHAR. All Variables are Listed in Appendix 3.

*p<.05; **p<.01; ***p<.001.

[a] A blank coeffecient entry indicates the variable did not contribute significantly to the regression equation.

and services.

In independent situations, it was difficult for the black students to make high academic grades when they were expected to achieve their goals alone (R^2 = .32, p < .05). What is remembered about student peers (beta = .48), professors (beta = .31), and achievement merit system (beta = .31) seem to greatly affect academic integration. It was also found that the absence of social and intellectual growth in an independent environment (R^2 = .35, p < .02) was also related to social and academic experiences. The immobility in independent situations, however, did not seem to influence the students' decision to attend another college where there is encouragement and support (R^2 = .22, p < .40), because of their financial inability (R^2 = .35, p < .02).

Question #12: Is there a significant difference between the two groups with how they perceive the college, feedback influences, cognitive black models, and college environmental type?

A 2-tailed t-test was performed to determine significant response differences between the two groups attending different four-year universities. Of the exogenous factors from pre-entry data (SES), the t-test revealed mean SES (parents' income, education, occupation) was the same for both groups, $p > .05$. This finding reflects consistent correlational and regression findings throughout the study. Of the college-entry data (e.g., GPA, ACT, major), the two groups only differed significantly with achievement scores, $t(86) = 2.8$, $p < .01$. Why the groups decided to attend college differed significantly with educational experience, $t\ (86) = -2.1$, $p < .05$ and job opportunities, $t\ (86) = 2.1$, $p < .05$. Much of the variance in college reasons was significantly due to job opportunities, $F\ (1,86) = 2.5$, $p < .01$. The financial support for

TABLE 4

Multiple Regression Summaries for some retention of college and feedback influences on college environment

	Interdependent Environment[a]											
Variable	A Part		Ac Cepted		Min Opp		Equa Grad		Equa Academ		Res Pect	
	beta	t	beta	t	beta	t	beta	t	beta	t	beta	t
COLLEGE	.21	1.4							-.30	1.9*		
PROFESS									.46	3.0**		
BLACFAC												
CLASSES					.26	1.8			.32	2.3*	.24	1.6
STUDPEER							-.20	-1.0	.25	1.3		
CAMPLIFE			.27	1.6			.33	1.6			.35	1.8
SOCACTIV					.28	1.9*						
ACADSERV											.25	1.6
ACHMERIT									.28	1.8		
COMMUNIT	.34	2.3*	.25	1.8							.36	2.2*
PROFESSO					.30	1.7						
BLACFACU							-.29	-1.4	-.39	-2.2*		
PEERS			.30	1.8					-.27	-1.5		
COUNSELO			.28	1.9*								
COMMU	.37	-2.2*			-.52	-2.9**			.25	1.5		
F (15,58)=	2.9**		3.1***		1.9*		1.3		2.5**		1.6	

TABLE 4 (Continued)

Variable	Independent Environment[b] Par Tial		Grad Diff		Rem Iso		Unsup Ret		Soint Immo	
	beta	t	beta	t	beta	t	beta	t	beta	t
COLLEGE					.25	1.8				
PROFESS			.31	1.9*	-.30	-2.2*				
BLACFAC										
CLASSES										
STUDPEER	.23	1.1	.48	-2.3*	.24	1.5			.22	1.2
CAMPLIFE										
SOCACTIV			-.43	-2.3*					.29	1.9*
ACADSERV									.29	1.8
ACHMERIT			.31	1.9*	.32	2.5**				
COMMUNIT										
PROFESSO			-.30	-1.6						
BLACFACU			.28	1.4						
PEERS	-.30	-1.5	-.32	-1.7			-.27	-1.5		
COUNSELO							.61	3.8***		
COMMU										
F (15,58)=	1.2		1.9*		4.4***		2.0*		2.1*	

Note. Knowledge Retention Variables are COLLEGE, PROFESS, BALCFAC, CLASSES, STUDPEER, CAMPLIFE, SOCACTIV ACHMERIT, COMMUNIT.

Feedback Influences are PROFESSO, BLACFACU, PEERS, COUNSELO, COMM. All variables are listed in Appendix 3.

[a] A blank coeffecient entry indicates the variable did not contribute significantly to the regression equation.

[b] A blank coeffecient entry indicates the variable did not contribute significantly to the regression equation.

*p<.05; **p<.01; ***p<.001.

college tended to differ significantly with work, t (86) = -3.3, p < .001; loans, t (86) = -3.6, p < .001, and workstudy, t (86) = 3.4, p < .001.

In examining what the groups remembered about these two different universities, the groups did not retain similar thoughts about the college, t (82) = -2.5, p < .01 and community, t (82) = -3.7, p < .000. Some of the students thought less of their college and community than others. However, the greatest variance between knowledge retention variables was accounted for with the achievement merit system, F (1, 86) = 2.0, p < .05). The feedback influences for what the groups retained about the college environment did not differ significantly between groups. Similarly, the groups did not differ significantly with how they perceived black faculty members as cognitive models to succeed in the college environment (p > .05).

The two groups, however, did differ significantly on the the interdependent and independent environmental scales. Being a part of a cooperative environment was perceived less interdependent by one group, t (84) = -3.0, p < .01. This significant interdependent difference was also found with feeling accepted, t (84) = -3.4, p < .001 and respected, t (84) = -2.4, p < .02). Having minority opportunities in relationship to a supportive environment was not perceived by both groups, t (84) = -2.0, p < .05. On the independent scale, the groups also differed significantly about remaining in an independent college environment, t (84) = 2.9, p < .01, and viewing blacks at predominantly white colleges as isolated, t (84) = -3.1, p < .002.

CONCLUSIONS

Academic integration in college settings is frequently viewed as a significant determinant of college attainments. When students become academically integrated, they are able to perform successfully. This academic success frequently eventuates

into college persistence and graduation. The findings from this study support the significance of academic integration of the black students attending the predominantly white universities. However, the study has identified some possible underlying determinants of academic integration for the black students.

It is evident from the findings that the experiences that the black students have in academic settings have a strong impact on their satisfaction and perception levels. The student-institutional fit for the black students seems to be defined in relationship to perceived academic and social support systems in the college settings. When the black students believe there is academic equity within the achievement merit system, they are more apt to be satisfied with the college setting. However, if the academic and social experiences do not support equitable beliefs, the black students will begin to process negative thoughts that may eventuate college withdrawal. One can conclude from this study that the propensity for this college dropout behavior can possibly be averted with strong black faculty mentoring programs with the black students. It can also be concluded that a substantial number of black faculty members at the universities could facilitate black students with postsecondary retention and graduation. Therefore, retention programs should focus on academic activities that will enable black faculty and students to interact in various campus settings.

Not only should the retention programs at these universities be concerned with providing social activities for black students, but activities that enable black students to share thoughts and feelings of academic and social experiences from the college environment as well. In fact, there seems to be a need for more academic support from the counselors at the universities, particularly since academic integration appeared to be more significant than social integration.

There is a continuous need for the universities to recognize and accept cultural differences in the environment. The black students need to be surrounded with cultural identities that will enable them to feel accepted, respected, and supported in

the college environment. However, as the college 90s become more pluralistic with an international student population, the black students will find themselves functioning more in an independent college settinmg than in previous decades. Conjecturally, as college participation and retention rates of black students continue to decline, the recruiting efforts for international students will increase at predominantly white colleges and universities. As a result, the black students who become assimilated, as well as those students who accept the setting as it is, will have to find their own academic support systems within the environment.

It is quite evident from the study that more research is needed to examine the processes of academic integration for college black students. How black students respond to their college environment greatly depends on whether or not they feel accepted in the academic and social setting. It would be beneficial if outcome assessments were conducted with the black students by the end of their second college year.

By no means did this study attempt to generalize about blacks on predeominantly white campuses. What the study does show, however, is upon being recruited, the culture and climate of white campuses are salient features for black students to consider. As postsecondary institutions become more pluralistic, it stands that contextual factors as experienced by blacks need to be addressed. If the high attrition rates of blacks at predominantly white colleges cannot be overcome with special scholarship programs, perhaps there is a need to further examine access to higher education in relationship to access to equitable academic learning environments that foster graduate successes. This study is significant for understanding how educators can best prepare black students for predominantly white college settings.

APPENDIX 1
Sample items and internal reliability coefficients of scales

Scale	Sample item	N of items	Alpha
Knowledge retention and feedback influences	"Based on what you know about the academic services, how satisfied are you with having access to the academic services?" "How satisfied are you with the academic help from professors?"	10	.86
Cognitive Black Model	"Black faculty are good mentors for black students, because I have observed they are promoted to high positions on campus."	6	.93
Interdependent/Independent College Environment	"When black and white students work on group projects together, my instructors or professors grade all group members the same." "It is difficult for black students to make high academic grades at predominantly white colleges, because they have to achieve their	15	.86

APPENDIX 1 (continued)
Sample items and reliability coefficients of scales

	academic goals alone."		
All Scales	All items	36	.83

APPENDIX 2
Operational Definitions of Measurement Scales

Cognitive Retention

The knowledge obtained and remembered to serve as a guide for subsequent actions. Indicators: recognizes, knows, observes, remembers.

Cognitive Feedback Influences

Response information from the environment that confirms or refutes perceptions, and in turn, directs one's actions. Indicators: help, support, criticism.

Cognitive Black Model Influences

Seeing other similar people perform successfully or unsuccessfully in the environment confirms or refutes perceptions, and in turn, directs one's actions. Indicators: mentor, example, similarity, identification.

Interdependent/Cooperative Environment

A setting in which interaction between individual and group goals are linked and dependent on each other. Individual goals are attained only if other participants in the environment can attain the goals (Johnson et al., 1983). Indicators: security, trust, acceptance, equal, supported, interact, depend, cooperate.

Independent/Competitive Environment

A setting in which an individual can attain the goal only if other participants

cannot attain their goals (Johnson et al., 1983). Individual functions as a separate entity to achieve desired goals. Indicators: isolation, distrust, rejected, unequal, unsupported.

Actual Experiences

The participation in events in which the person learns the effects of behaviors. If the person learns that behaviors eventuate in success or failure, efforts will be cognitively appraised in relationship to self. On the other hand, if person observes that effects are different for other performing the same behavior, conceptions of new behavioral patterns will be constructed in relationship to self and others in the environment.

APPENDIX 3
Description of variables used in the 3 scales

Knowledge Retention Variables

1. **COLLEGE** = College
2. **PROFESS** = Professor
3. **BLACFAC** = Black Faculty
4. **CLASSES** = Classes
5. **SUDPEER** = Student Peer
6. **CAMPLIFE** = Campus Life
7. **SOCACTIV** = Social Activities
8. **ACADSERV** = Academic Services
9. **ACHMERIT** = Achievement Merit System
10. **COMMUNI** = Community

Feedback Influences

11. **PROFESS** = Professor
12. **BLACFACU** = Black Faculty
13. **PEERS** = Peers
14. **COUNSELO** = Counselor
15. **COMMU** = Community

Cognitive Black Model

16. **BLACSEC** = Black Faculty Security
17. **BLFACMEN** = Black Faculty Mentor
18. **NEEBLAFAC** = Need Black Faculty
19. **BLACIDENTI** = Black Identity
20. **BLACSHAR** = Black Faculty Sharing
21. **ASSIGMEN** = Mentor Assignment

Interdependent College Environment

22. **A PART** = A Part of
23. **EQUAGRAD** = Equal Grades
24. **ACCEPTED** = Accepted

APPENDIX 3 (continued)
Description of variables used in the 3 scales

25. **SUPRAREL** = Supported Race Relations
26. **MINOPP** = Minority Opportunities
27. **EQUACADEM** = Equal Academic Services
28. **RESPECT** = Respect
29. **ACCFAACT** = Access to Facilities and Acitivities

Independent College Environment

30. **PARTIAL** = Partial
31. **GRADDIFF** = Grade Difficulty
32. **REMISO** = Remain Isolated
33. **UNSUPCOL** = Unsupported College
34. **UNSUPRET** = Unsupported Retention
35. **SOINTIMMO** = Social and Intellectual Immobility
36. **FINIMMO** = Financial Immobility

REFERENCES

Aitken, N. D. (1982). College student performance, satisfaction, and retention. . *The Journal of Higher Education*, 53(1), 32-50.

Alexander, K. L., Riordan, C., Fennessey, J., & Pallas, A. M. (1982). Social background, academic resources, and college graduation: Recent evidence from the National Longitudinal Survey. *American Journal of Education*, 90, 315-333.

Allen, W. R. (1985). Black student, white campus: Structure, interpersonal, and psychological correlates of success. *Journal of Negro Education*, 54(2), 134-147.

Astin, A. (1975). *Preventing students from dropping out.* San Francisco: Jossey-Bass.

Astin, A. (1982). *Minorities in American higher education.* San Francisco: Jossey-Bass.

Astin, A. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel,* 25, 297-308.

Avokian, A. N., Mackinney, A., & Allen, G. R. (1982). Race and sex differences in student retention at an urban university. *College and University*, 57, 160-165.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs: Prentice-Hall.

Bandura, A. (1986). *Social foundations of thought & action: A social cognitive theory. Englewood Cliff: Prenctice-Hall*

Bean, J. P. (1982). Student attrition, intentions, and confidence: interactions effects in a path model. *Review of Higher Education*, 17, 291-320.

Bennett, C., & Bean, J. P. (1984). A conceptual model of black student attrition at a predominantly white university. *Journal of Educational Equity and Leadership*, 4, 173-188.

Black issues in higher education. (1985, September 15). [Interview with Atwell], pp.4-5, 8.

Minority participation in higher education: Atwell speaks out.

Black issues in higher education (1987, March 1). [Interview with Harold L. Hodgkinson, senior research fellow at American Council on Education].

Hodgkinson: The demographic picture and what it means for higher education. A special report on recruitment and retention, pp. 2-3.

Burrell, L. F. (1981). Is there a future for Black students on predominantly White campuses? *Integrateducation*, 18, 23-27.

Gamson, Z. F., Peterson, M. W., & Blackburn, R. T. (1980). Stages in the response of white colleges and universities to black students. *The Journal of Higher Education*, 51(3), 255-267.

Gibbs, J. T. (1973). Black students/white university: Different expectations. *Personnel and Guidance Journal*, 51, 463-469.

Gottfredson, D. C. (1981). Black-white differences in the educational attainment process: What have we learned? *American Sociological Review*, 46, 542-557.

Hall, M., & Allen, W. R. (1983). Race consciousness and achievement: Two issues on the study of Black graduate/professional students. *Integrateducation*, 20(1-2), 56-61.

Halpin, A. W., & Croft, D. B. (1963). *The organizational climate of schools.* Chicago: University of Chicago.

Jaschik, S. (1989, July 19). Lawsuit forcing U. S. to monitor colleges on race is revived. *The Chronicle of Higher Education*, pp. A1, A22.

Johnson, D. W., Johnson, R. T., & Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and a meta-analysis of the research. *Review of Educational Research*, 53(1), 5-54.

Joreskog, K. G., & Sorbom, D. (1981). LISREL: *Analysis of linear structural relationships by maximum likelikhood and least squares methods, user's guide, version* V. Chicago: International Eduational Services.

process: What have we learned? *American Sociological Review*, 46, 542-557.

Kerckhoff, A. C., & Campbell, R. (1977). Black-white differences in the educational attainment process. *Sociology of Education*, 50, 15-27.

Lacy, W. (1978). Interpersonal relationships as mediators of structural effects: College socialization in a traditional and an experimental university environment. *Sociology of Education*, 51, 201-211.

Lewin, K. (1936). *Principles of Topological Psychology.* New York: McGraw-Hill.

Lichtman, C. M., Bass, A. R., & Ager, J. W. Jr. (1989). Differences between Black and White students in attrition patterns from an urban commuter university. *Journal of College Student Development*, 4, 173-188.

Loo, C. M., & Rolison, G. (1986). Alienation of ethnic minority students at a predominantly white universtiy. *The Journal of Higher Education*, 57(1), 58-77.

McCauley, D. P. (1988). Effects of specific factors on Blacks' persistence at a predominantly White university. *Journal of College Student Personnel*, 29(1), 48-51.

Moore, W., Jr., & Carpenter, L. C. (1985). Academically underprepared students. In / L. Noel & R. Levitz (Eds.), *Increasing student retention.* San Francisco: Jossey-Bass.

Moos, R. H. (1976). *The human context: Environmental determinants of behaviors.* New York: Wiley.

Nettles, M., Gosman, E. J., Thoney, A. R., & Dandridge, B. A. (1985). *The causes and consequences of college students' performance: A focus on black and white students' attrition rates, progression rates and grade point averages* (Report No. CB50-CCCSP385). Nashville, TN: The Tennessee Higher Education Commission.

Pace, C. R. (1984). *Measuring the quality of college student experiences.* Los Angeles: University of California, Higher Education Research Institute.

Parker, C., & Schmidt, J. (1982). Effects of college experience. In H. Mitzel (Ed.), *E Encycl* opedia of educational research (5th ed.) . New York: Free Press.

Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education*, 51(1), 60-75.

Pascarella, E. T., & Chapman, D. W. (1983). A multiinstitutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal*, 20(1), 87-102.

Pascarella, E. T. (1984). College environmental influences on students' educational aspirations. *The Journal of Higher Education*, 55(6), 751-771.

Pascarella, E. T., Smart, J. C., Ethinton,C. A., & Nettles, M. T. (1987). The influence of college on self-concept: A consideration of race and gender differences. *American Educational Research Journal*, 24(1), 49-77.

Pascarella, E. T. (1985). College environmental influences on learning and cognive development: A critical review and synthesis. In J. Smart (Ed.), *Journal of Higher Education*, 56, 640-663.

Portes, A., & Wilson, K. L. (1976). Black-white differences in educational attainment. *American Sociological Review*, 41, 414-4.

Sedlacek, W., & Webster, D. (1978). Admission and retention of minority students in large universities. *Journal of College Student Personnel*, 19, 242-248.

Tagiuri, R. (1968). The concept of organizational climate. In R. Tagiuri & G. H. Litwin (Eds.), *Organizational climate: Exploration of concept*. Boston: Harvard University, Division of Research, Graduate School of Business Administration.

Taylor, C. E. (1986). Black students on predominantly white college campuses in the 80s. *Journal of College Student Personnel*, 27(2), 196-202.

Thomas, G. E., Alexander, K. L., & Eckland, B. K. (1979). Access to higher education: The importance of race, sex, social class, and academic credentials. *School Review*, 82, 133-156.

Thomas, G. E., & McPartland, J. (1981). Have college desegregation policies threatened Black student enrollment and Black colleges? An empirical analysis. *Journal of Negro Education*, 53, 389-399.

Tinto, V. (1982). Limits of theory and practice in student attrition. *The Journal of Higher Education*, 53(6), 687-700.

Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition.* Chicago: The University of Chicago Press.

Tracey, T. J., & Sedlacek, W. E. (1984). Noncognitive variables in predicting academic success by race. *Measurement and Evaluation in Guidance*, 16, 171-178.

Tracey, T. J., & Sedlacek, W. E. (1985). The relationship of noncognitive variable to academic success: A longitudinal comparison by race. *Journal of College Student Personnel*, 26, 405-410.

Trujillo, C. M. (1986). A comparative examination of classroom interactions between professors and minority and non-minority college students. *American Educational Research Journal*, 23(4), 629-642.

Valverde, L. (1985). Low-income students. In L. Noel & R. Levitz (Eds.), *Increasing student retention*. San Francisco: Jossey-Bass.

Willie, C., & McCord, H. (1973). *Black students at white colleges*. New York: Praeger.

Wilson, K. M. (1981). Analyzing the longterm performance of minority and non-minority students: A tale of two studies. *Research in Higher Education*, 15(4), 351-375.

Wolfle, L. M. (1985). Postsecondary educational attainment among whites and blacks. *American Educational Research Journal*, 22(4), 501-525.